



September 18, 2018

Science Advisory Board  
Environmental Protection Agency  
Mail code 1400R  
1200 Pennsylvania Ave., NW  
Washington, DC 20460-4164

**RE: AF&PA/AWC Comments on SAB's Draft Report on EPA's 2014 Draft  
"Framework for Assessing Biogenic CO<sub>2</sub> Emissions from Stationary Sources."**

Dear Members of the EPA Science Advisory Board (SAB):

The American Forest & Paper Association and the American Wood Council appreciate the opportunity to submit the following brief comments regarding the latest draft SAB report on the U.S. Environmental Protection Agency's (EPA) 2014 draft "Framework for Assessing Biogenic CO<sub>2</sub> Emissions from Stationary Sources."

The American Forest & Paper Association (AF&PA) serves to advance a sustainable U.S. pulp, paper, packaging, tissue and wood products manufacturing industry through fact-based public policy and marketplace advocacy. AF&PA member companies make products essential for everyday life from renewable and recyclable resources and are committed to continuous improvement through the industry's sustainability initiative - [\*Better Practices, Better Planet 2020\*](#). The forest products industry accounts for approximately four percent of the total U.S. manufacturing GDP, manufactures over \$200 billion in products annually and employs more than 950,000 men and women. The industry meets a payroll of approximately \$50 billion annually and is among the top 10 manufacturing sector employers in 45 states.

The American Wood Council (AWC) is the voice of North American wood products manufacturing, an industry that provides almost 450,000 men and women in the United States with family-wage jobs. AWC represents 86 percent of the structural wood products industry, and members make products that are essential to everyday life from a renewable resource that absorbs and sequesters carbon. Staff experts develop state-

of-the-art engineering data, technology, and standards for wood products to assure their safe and efficient design, as well as provide information on wood design, green building, and environmental regulations. AWC also advocates for balanced government policies that affect wood products.

Forest products manufacturers are heavily regulated but must operate very efficiently in a fiercely competitive global market. The paper industry is particularly capital-intensive, and the industry has a long investment planning horizon. Accordingly, regulatory certainty is essential.

### **Baseline**

We appreciate that the SAB's August 29, 2018 draft report recognizes the challenges of using an anticipated baseline approach for regulatory purposes. As the draft report puts it:

“ . . . The complexity of such an approach makes it difficult to parameterize and validate. The lack of empirical data regarding many of these relationships and the resulting uncertainties pose a significant challenge to use this type of model in the regulatory context. . . . Employing models of this complexity is likely beyond the capabilities of many practitioners.”

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“As stated in 2012, there are tradeoffs between ease of implementation (transaction costs), precision (getting it right in every location versus overall accuracy), and policy effectiveness (ensuring that the policy objectives are being met). We continue to recognize the difficulty of undertaking an anticipated baseline approach, and practicality should be an important consideration in the agency's decision making. All methods considered should be subject to an evaluation of the costs of implementation and compliance and weighed against any increase in accuracy and precision that they might yield. Ultimately, it is critical that there is a balance between accuracy and minimization of implementation costs.” (p. 7)

We strongly agree with these concerns and continue to believe that a reference point baseline approach is better suited for regulatory purposes. Anticipated baselines are extremely complex to model and can lack practicability, accuracy and predictability compared with a simpler, more straightforward reference point baseline approach in the regulatory context. This is confirmed by the 2014 study by Buchholz et al., entitled,

“Uncertainty in Projecting GHG Emissions from Bioenergy,”<sup>1</sup> which is referenced in the SAB’s draft report (p. 19).

Key insights provided by the Buchholz et al. study include the following:

- Considering the particular context for which it is to be used, at some point the level of uncertainty rules out the usefulness of a baseline.
- “[A]n anticipated future baseline has one major caveat: being a forward-looking tool relying on additional assumptions beyond measurable data points (as applied with a constant reference point baseline), the uncertainty associated with an anticipated future baseline increases over time.”
- ***“[N]ever in 30 years of timber trend assessments have the near-term anticipated future projections of surplus roundwood been as accurate as the constant reference would have been.”*** (p. 1047; emphasis added)
- “[I]t is hard to have tremendous confidence in our ability as scientists to accurately project the complex dynamics of forest growth, wood use, harvest, land-use change, management intensity, forest policy, disturbance, and other factors influencing surplus growth, even at relatively short (<10 years) time periods and even on a national basis.”
- “Given the challenges in predicting the future status of forest resources, . . . constant reference baselines might be more appropriate for monitoring and regulatory frameworks.”

### **Data Limitations, Scale and Timeframes**

We also would like to raise some additional points for the SAB to bear in mind. First, a reference point baseline approach should utilize the data of the U.S. Forest Service Inventory and Analysis (FIA) program, but its limitations must be recognized. For many years, AF&PA has supported increased funding for the FIA program, but currently data collection in the western part of the U.S. only occurs on a ten-year cycle. Ten years of measurements provide an estimate of average conditions at the midpoint of the cycle. For reliable detection of change, another cycle of data collection would be needed, but would only be completed 15 years after the midpoint of the initial cycle.

When comparing measurements against any baseline, it is important that only statistically significant differences are recognized, to ensure that policies are not based simply on random chance or sample variability. The smaller the region and the shorter the timeframe, the more uncertain the projections become. Moreover, larger regions and timeframes mitigate the influences that transitory factors, such as the housing cycle, weather and forest age, have on carbon stocks.<sup>2</sup> We are concerned that the

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<sup>1</sup> Thomas Buchholz, Stephen Prisley, Gregg Marland, Charles Canham and Neil Sampson, “Uncertainty in Projecting GHG Emissions from Bioenergy,” *Nature Climate Change* (Nov. 26, 2014): [www.nature.com/articles/nclimate2418](http://www.nature.com/articles/nclimate2418)

<sup>2</sup> See, e.g., Reid Miner and Caroline Gaudreault, “A Review of Biomass Carbon Accounting Methods and Implications,” National Council for Air and Stream Improvement, Technical Bulletin No. 1015, (July 2013) (“Even in regions where long-term average forest carbon stocks are stable, there are periods during

lookback period suggested in the SAB's draft report is too short to be practical and would complicate long-term planning for facilities that use biomass to generate energy, particularly if emissions factors vary sharply from one assessment period to the next.

### **Forest Products Manufacturing Residuals**

Finally, we reiterate that paper and wood products manufacturers are the largest industrial producer and user of bioenergy, predominately from the biomass residuals that are integral and incidental to the forest products manufacturing process. On average, about two-thirds of the energy powering forest products mills is derived from biomass. The process of producing bioenergy from forest products manufacturing residuals is highly efficient, using combined heat and power technology to produce both heat and electricity to power the mills or supply electricity to the grid. This sustainable use of forest products manufacturing residuals for energy provides enormous greenhouse gas reduction benefits.

This conclusion is supported by an in-depth study conducted by the National Council for Air and Stream Improvement (NCASI),<sup>3</sup> entitled, "Greenhouse Gas and Fossil Fuel Reduction Benefits of Using Biomass Manufacturing Residuals for Energy Production in Forest Products Facilities" (Aug. 2014). The NCASI study examined the life cycle greenhouse gas and fossil fuel reduction benefits of using biomass residuals for energy production in the U.S. forest products industry.

Key findings of the study include:

- There are substantial greenhouse gas reduction benefits associated with using biomass manufacturing residuals for energy in the forest products industry. Accounting for fossil fuel displacement and avoided emissions associated with disposal, the use of biomass residuals each year avoids the emission of approximately 181 million metric tons of CO<sub>2</sub>e.
- The benefits of using biomass residuals for energy have been rapidly realized:
  - The greenhouse gas reduction benefits are realized in 1.2 years or less.
  - Even if the benefits of displacing fossil fuels are ignored, the use of manufacturing residuals for energy produces lower cumulative greenhouse gas emissions, with a weighted average break-even time of 7.6 years.
  - When considering its ongoing production and use of biomass energy over many years, the U.S. forest products industry is producing net greenhouse gas benefits by using biomass as its major energy source.

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which stocks may increase or decrease for a variety of reasons including market dynamics and natural disturbances. The time used to judge the stability of forest carbon stocks, therefore, must be long enough so as to avoid being misled by transient conditions that may not be important in the longer term.”)

<sup>3</sup> The National Council for Air and Stream Improvement is an independent, non-profit research institute that focuses on environmental and sustainability topics relevant to forest management and the manufacture of forest products. <http://ncasi.org/Downloads/Download.ashx?id=9603>

- If the U.S. forest products industry did not use biomass residuals and relied solely on fossil fuels for energy, the ultimate direct releases of greenhouse gases approximately would quadruple.

These findings underscore the importance of recognizing the carbon benefits of the forest products industry's use of biomass energy, regardless of the state of forest carbon stocks.

It has been over eight years since EPA began its deliberations on biogenic carbon accounting. We hope that our participation and comments over the years have been helpful in EPA's efforts to resolve the regulatory uncertainty regarding biogenic CO<sub>2</sub>. Thank you for your consideration of these comments. If you have any questions, please feel free to contact me or Stan Lancey (202-463-2700) on my staff.

Respectfully submitted,



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